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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,698	02/12/2004	Marvin L. Green	IN-5630	5722

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EXAMINER	
BOYKIN, TERRESSA M	
ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 02/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/777,698	GREEN ET AL.	
	Examiner	Art Unit	
	Terressa M. Boykin	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

- ***Obviousness-type Double Patenting***

Claims 1 and 34 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/844629. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claims 1 and 34 are identical in scope compared to claim1 of U.S. Application 10/844629 even though the wording between the claims is slightly different. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 34 claim a composition for use in a coating composition and limitations thereof and claim 1 of US application 10/844629 describes a coating composition with the same limitations as above. This is a double patenting rejection.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See also MPEP § 804.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim Rejections - 35 USC § 102

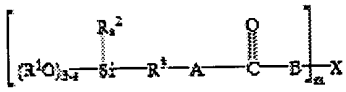
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-42 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 6319311 see abstract, cols. 2-9, Example 15, claims 1-4.

With regard to applicants' claims 1, 14, 23, and 34 40-42 note that USP 6319311 discloses powder coating formulations which include as a component thereof a silyl carbamate of the formula:



wherein the silanes are useful as crosslinkers and/or adhesion promoters. The reference also discloses silane compounds which also may be employed in TGIC/polyester powder coating systems. In such systems carboxyl-functional polyester resins are cured with TGIC (triglycidyl isocyanurate). A polyester resin suitable for production of powder coatings with TGIC in the formulation. The resin is obtained by fusion esterification of neopentyl glycol, 1,4-cyclohexanedimethanol, 1,6-hexane diol, trimethylolpropane, terephthalic acid and adipic acid. Products with average molecular

weight between 4,500 and 12,500 with acid values of 10-26 mg KOH/g and Tg of 40-85 C. are obtained which are suitable for making powder coatings containing 1.4-5.3% by weight of TGIC. The silanes of the reference can also be used with similar carboxyl functional polyesters that are cured with hydroxyalkylamides.

With regard to claim 19 and 25 note that the reference discloses silyl carbamates, where the moieties may be prepared by reaction of polyol compounds with isocyanatoalkylalkoxysilanes. Novel silane carbamates which may be obtained in this manner include carbamates so formed in which the polyol compound is a hydrocarbon diol. Linearly symmetrical diols such as 1,4-cyclohexanediol, 4,4'-isopropylidenedicyclohexanol and 1,4-cyclohexanedimethanol also produce preferred silane carbamate compounds of the invention. Silyl carbamates of this type can also be made by the reaction of a silyl isocyanate with a polymeric polyol, such as a polyether polyol, a polyester polyol, a polybutadiene polyol or a polyacrylate polyol. Examples of suitable isocyanatoalkylalkoxysilanes are isocyanatopropyltrimethoxysilane, isocyanatopropylmethyldimethoxysilane, isocyanatopropylmethyldiethoxysilane, isocyanatopropyltriethoxysilane, isocyanatopropyltriisopropoxysilane, isocyanatopropylmethydiisopropoxysilane; isocyanatoneohexyltrimethoxysilane, isocyanatoneohexyldimethoxysilane, isocyanatoneohexydiethoxysilane, isocyanatoneohexyltriethoxysilane, isocyanatoneohexytriisopropoxysilane, isocyanatoneohexyldiisopropoxysilane, isocyanatoisoamyltrimethoxysilane, isocyanatoisoamyldimethoxysilane, isocyanatoisoamylmethyldiethoxysilane,

isocyanatoisoamyltriethoxysilane, isocyanatoisoamyltriisopropoxysilane, and isocyanatoisoamylmethyldiisopropoxysilane.

With regard to claims 3, 5, 35 and 39, the reference discloses examples of suitable polyol compounds which will produce solid silyl carbamates with isocyanatoalkylalkoxysilanes include 2,3-butanediol; 1,6-hexanediol; 1,4-cyclohexanedimethanol; 1,4-cyclohexanediol; 1,7-heptanediol; 1,8-octanediol; pentaerythritol; 1,12-dodecanediol; 1,10-decanediol; 3,6-dimethyl-4-octyne-3,6-diol; 1,9-nonanediol; bisphenol A; hydrogenated bisphenol A (i.e., 4,4'-isopropylidenedicyclohexanol); and 1,4-butanediol.

With regard to claims 6 – 11, and 26-33 note that the reference discloses powder coating formulations 4A and 4B were prepared from the ingredients listed in Table IV, where the numerical values are parts by weight.

With regard to claims 12 and 13 note that claims 16 and 17 of the reference discloses a powder coating formulation as in claim 1, further comprising a resin system selected from the group consisting of polyurethane systems based on blocked polyisocyanates and polyols; acid functional polymers cured with epoxy functional curing agents; anhydride/epoxy systems; epoxy/polyol systems; hybrid systems employing epoxide resins and polyesters; and systems based on hydroxyalkylamides and acid functional polymers.

With regard to claims 15, 20, note that the reference discloses examples of suitable polyol compounds which will produce solid silyl carbamates with isocyanatoalkylalkoxysilanes include 2,3-butanediol; 1,6-hexanediol; 1,4-cyclohexanedimethanol; 1,4-cyclohexanediol; 1,7-heptanediol; 1,8-octanediol; *pentaerythritol*; 1,12-dodecanediol; 1,10-decanediol; 3,6-dimethyl-4-octyne-3,6-diol; 1,9-

nonanediol; bisphenol A; hydrogenated bisphenol A (i.e., 4,4'-isopropylidenedicyclohexanol); and 1,4-butanediol.

Thus the reference discloses a polyester resin prepared from the same components as claimed by applicants. Thus in view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16, 22 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over **USP 63193311** see abstract, cols. 2-9, Example 15, claims 1-4.
in view of **USP 6294619.**

With regard to claims 16, 22, 36, the reference discloses a polyester resin prepared from the same components as claimed by applicants except for the particular use of the hexahydrophthalic anhydride. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the hexahydrophthalic anhydride

since such moieties are commonly used in the art. Note **USP 6294619** wherein the reference discloses that cycloaliphatic component of the polyester polyol includes the reaction product of at least one cycloaliphatic acid and at least one cyclic polyol. Any suitable cycloaliphatic acid can be employed when practicing this invention. For example, the cycloaliphatic acid can be the 1,2- 1,3- and/or 1,4-isomer of hexahydrophthalic acid, the latter of which is also referred to as 1,4-cyclohexanedicarboxylic acid. In place of a dicarboxylic acid, the esters thereof with short chain alkanols (e.g. dimethyl, diethyl, or dipropyl esters) can also be used. In many instances, however, hexahydrophthalic anhydride is preferred.

Claims 17, 21 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 63193311 see abstract, cols. 2-9, Example 15, claims 1-4. in view of **USPub 20030050432.**

With regard to claims 17, 21 and 37-38 the reference discloses a polyester resin prepared from the same components as claimed by applicants except for the particular use of the glycidylneodecanoate moiety.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the glycidylneodecanoate since such moieties are commonly used in the art. Note **USPub 20030050432**, for example, discloses a completed polyester resin, prepared from one mole of pentaerythritol, eight moles of e-caprolactone, two moles of hexahydrophthalic anhydride, two moles of glycidylneodecanoate, and four moles of methyl carbamate, is disclosed below.

Claims 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6319311 see abstract, cols. 2-9, Example 15, claims 1-4.
in view of USP 5593785.

With regard to claims 18 and 24 the reference discloses a polyester resin prepared from the same components as claimed by applicants except for the particular use of a methyl carbamate.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the methyl carbamate since such moieties are commonly used in the art. For example, **US 5593785** discloses an adherent film-forming composition comprising a carbamate-functional acrylic polymer, a polyester and an aminoplast crosslinking agent is disclosed. The coating composition can be used to produce clear coats in composite color plus clear coatings exhibiting good levels of acid etch resistance as well as high intercoat adhesion. Also disclosed are a method of applying a composite color plus clear coating to a substrate and the coated article prepared by such a method.

The carbamate groups can be incorporated into the polyester by first forming a hydroxyalkyl carbamate that can be reacted with the polyacids and polyols used in forming the polyester. A polyester oligomer can be prepared by reacting a polycarboxylic acid such as those mentioned above with a hydroxyalkyl carbamate. An example of a hydroxyalkyl carbamate is the reaction product of ammonia and propylene carbonate. The hydroxyalkyl carbamate is condensed with acid functionality on the polyester or polycarboxylic acid, yielding terminal carbamate functionality. Terminal carbamate functional groups can also be incorporated into the polyester by reacting isocyanic acid or a low molecular weight alkyl carbamate such as methyl carbamate with a hydroxy functional polyester. Also, carbamate functionality can be incorporated

into the polyester by reacting a hydroxy functional polyester with urea.

Consequently, the claimed invention cannot be deemed as unobviousness and accordingly is unpatentable.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at http://www.uspto.gov/ebc/index.html or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is **(571-272-1700).**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

Examiner Terressa Boykin
Primary Examiner
Art Unit 1711